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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,419	12/15/2003	Rodney T. Burt	TI-36094	6344
23494	7590	05/16/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/737,419	Applicant(s) BURT ET AL.	
	Examiner Khanh V. Nguyen	Art Unit 2817	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-11, 13-16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 7, 12 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/15/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

Claims 4, 5 is objected to because of the following informalities:

Claims 4, 18, "ff" should correctly be --fF--.

Claim 5, page 3, line 6, "a integrator" should correctly be --an integrator--.

Claim 19, "said integrator resistor" should correctly be --an integrator resistor--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 3, it is not clear which "gain bandwidth product" of which component is intended. "gain bandwidth product" should be read as --gain bandwidth product of the first amplifier--, (see [0024]).

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 2817

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 5, 6, 8-11, 13-16, 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. (6,897,731)/(20050088240).

Regarding claims 1, 9, 13, 16, 19, Zhang et al. (Fig. 5) disclose an amplifier circuit comprising: a HI-SPEED amplifier (502) can be read as a first amplifier having an inverting terminal (-) configured as an inverting input terminal (INN) and an output terminal configured as an output terminal (VOUT); an AUTO-ZERO amplifier (512) can be read as a second amplifier/LOW\_SPEED amplifier configured as an integrator circuit, the second amplifier (512) having a non-inverting input terminal (+) configured as a non-inverting input terminal (INP), an inverting input terminal coupled through an integrator resistor (R1) to the inverting input terminal of the amplifier circuit, and an output terminal coupled to a non-inverting input terminal (+) of the first amplifier (502); and a capacitor (Co) of block 516) is capable of function as a compensation circuit coupled between the output terminal (VOUT) and the inverting input terminal (-) of the second amplifier (512), the compensation circuit (Co) is capable of configuring to provide a path for current needed by the integrator resistor (R1) due to any small signal appearing at the inverting input terminal (INN) of the amplifier circuit.

Regarding claims 2, 10, 14, wherein the compensation circuit is a capacitor (Co) coupled between the output terminal (VOUT) and the inverting input terminal (-) of the second amplifier (512).

Regarding claims 3, 11, 15 wherein the component value of the capacitor can be determined the GBW and the integrator resistor (R1).

Regarding claim 5, wherein the integrator resistor (R1) having the connection as claimed; and capacitor (C1) can be read as an integrator capacitor having the connection as claimed.

Regarding claim 6, wherein the capacitor (Co) can be read as a compensation capacitor having the connection as claimed.

Regarding claim 8, wherein the amplifier (502) is a HI-SPEED amplifier and an AUTO-ZERO amplifier can be a LOW-SPEED amplifier having the function thereof.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al.

Zhang et al. disclose the claimed invention except the capacitance value within claimed range. However, capacitance ( $C_o$ ) of Zhang et al. is capable of handling a wide range of values (see col. 5, lines 1-3). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the capacitance value between within the claimed range for Zhang et al. to achieve a desired design criteria.

#### ***Allowable Subject Matter***

Claims 7, 12, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 7, 12, 17 call for, among others, the integrator resistor comprises at least two resistors having the connection as claimed.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional reference (Schanen (5,045,805)) shows further analogous prior art circuitry without the compensation capacitor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KHANH VAN NGUYEN**  
**PRIMARY EXAMINER**  
Art Unit: 2817